Contents

Volume 83, Number 1, July 1997

1 *Mini Review*: Cross-contamination and infection in the domestic environment and the role of chemical disinfectants *S. F. Bloomfield & E. Scott*

10 Biochemical characterization of pectate lyases produced by fluorescent pseudomonads associated with spoilage of fresh fruits and vegetables *C.-H. Liao, J. Sullivan, J. Grady & L.-J. C. Wong*

17 Analysis of conductance responses during depolymerization of pectate by soft rot *Erwinia* spp. and other pectolytic bacteria isolated from potato tubers *B. A. Fraaije, M. Bosveld, R. W. Van den Bulk & F. M. Rombouts*

25 Optimization of D-ribose production with a transketolase-affected *Bacillus subtilis* mutant strain in glucose and gluconic acid-based media *P. De Wulf, W. Soetaert, D. Schwengers & E. J. Vandamme*

31 Physiological and biochemical studies on psychrotolerance in *Listeria monocytogenes C. E. Jones, G. Shama, D. Jones, I. S. Roberts & P. W. Andrew*

36 Effects of physico-chemical factors influencing tyramine production by *Carnobacterium divergens F. Masson, A. Lebert, R. Talon & M. C. Montel*

43 Flow cytometric analysis of bacterial respiratory and enzymatic activity in the natural aquatic environment *N. Yamaguchi & M. Nasu*

53 Microbiological composition of raw milk from selected farms in the Camembert region of Normandy *N. Desmasures, F. Bazin & M. Guéguen*

59 CMC-liquefying enzyme, a low molecular mass initial cellulose-decomposing cellulase responsible for fragmentation from *Streptomyces* sp. LX *X. Li & P. Gao*

67 Influence of medium composition on the growth and antigen expression of *Helicobacter pylori E. J. Walsh & A. P. Moran*

76 The effects of agar concentration on the growth and morphology of submerged colonies of motile and non-motile bacteria *A. J. Mitchell & J. W. T. Wimpenny*

85 An improved plaque assay for poor plaque-producing temperate lactococcal bacteriophages *D. Lillehaug*

91 Bacteriological stability and growth kinetics of *Pseudomonas aeruginosa* in bottled water *L. M. Tamagnini & R. D. González*

95 The effect of temperature, pH and medium in a surface adhesion immunofluorescent technique for detection of *Listeria monocytogenes G. Duffy & J. J. Sheridan*

102 Detection and quantification of *Desulforhabdus amnigenus* in anaerobic granular sludge by dot blot hybridization and PCR amplification *S. J. W. H. Oude Elferink, H. A. Rinia, M. E. Bruins, W. M. de Vos & A. J. M. Stams*

111 Antimicrobial activity of food-related *Penicillium* sp. against pathogenic bacteria in laboratory media and a cheese model system *A. G. Larsen & S. Knochel*

120 Enumeration of *Enterococcus* sp. using a modified mE method *M. W. Rhodes & H. Kator*

127 Pediocin PD-1, a bactericidal antimicrobial peptide from *Pediococcus damnosus* NCFB 1832 *G. Green, L. M. T. Dicks, G. Bruggeman, E. J. Vandamme & M. L. Chikindas*

Volume 83, Number 2, August 1997

133 *Note*: Genetic and biochemical characterization of nisin Z produced by *Lactococcus lactis* spp. *lactis* biovar. *diacetylactis* UL 719 *J. Meghrous, C. Lacroix, M. Bouksaïm, G. LaPointe & R. E. Simard*

139 Proteolytic enzyme activity in lactococci grown in different pretreated milk media *W. C. Meijer & J. Hugenholtz*

147 Metabolic fingerprinting and fermentative capacity of the intestinal flora of pigs during pre- and post-weaning periods *M. Katouli, A. Lund, P. Wallgren, I. Kühn, O. Söderlind & R. Möllby*

155 *A Review*: Plasmids and bacterial resistance to biocides *A. D. Russell*

166 Formate and ethanol are the major products of glycerol fermentation produced by a *Klebsiella planticola* strain isolated from red deer *G. N. Jarvis, E. R. B. Moore & J. H. Thiele*

175 Carbenicillin-hydrolysing penicillinase mediated by a plasmid of *Proteus mirabilis* and its relationship to the PSE-type enzymes of *Pseudomonas aeruginosa Y. Ito & T. Hirano*

181 The effect of high hydrostatic pressure on *Listeria monocytogenes* in phosphate-buffered saline and model food systems *R. K. Simpson & A. Gilmour*

189 Degradation of fluoranthene, pyrene, benz[*a*]anthracene and dibenz[*a,h*]anthracene by *Burkholderia cepacia A. L. Juhasz, M. L. Britz & G. A. Stanley*

199 A study of the microflora of some recycled fibre pulps, boards and kitchen rolls *M.-L. Suihko & E. Skyttä*

208 Rapid quantitative analysis of binary mixtures of *Escherichia coli* strains using pyrolysis mass spectrometry with multivariate calibration and artificial neural networks *E. M. Timmins & R. Goodacre*

219 Identification of sites of injury in *Lactobacillus bulgaricus* during heat stress *P. Teixeira, H. Castro, C. Mohácsi-Farkas & R. Kirby*

227 Diversity and partial characterization of putative virulence determinants in *Pasteuria penetrans*, the hyperparasitic bacterium of root-knot nematodes (*Meloidogyne* spp.) *K. G. Davies & M. Redden*

236 *In vitro* ^{14}C-amino acid fermentation by CF3™, a characterized continuous-flow competitive exclusion culture of caecal bacteria *M. E. Hume, D. J. Nisbet & J. R. DeLoach*

243 A non-intrusive method for the measurement of water vapour sorption by bacterial spores *G. O. Rubel*

248 Detection of bacteriocins of lactic acid bacteria isolated from foods and comparison with pediocin and nisin *M. J. Coventry, J. B. Gordon, A. Wilcock, K. Harmark, B. E. Davidson, M. W. Hickey, A. J. Hillier & J. Wan*

259 The use of bacteriophage-based systems for the separation and concentration of *Salmonella A. R. Bennett, F. G. C. Davids, S. Vlahodimou, J. G. Banks & R. P. Betts*

Volume 83, Number 3, September 1997

267 *Note*: Purification of amylase secreted from *Bifidobacterium adolescentis S. K. Lee, Y. B. Kim & G. E. Ji*

273 The germinability of spores of a psychrotolerant, non-proteolytic strain of *Clostridium botulinum* is influenced by their formation and storage temperature *R. I. Evans, N. J. Russell, G. W. Gould & P. J. McClure*

281 Physiological approach to extracellular polysaccharide production by *Lactobacillus rhamnosus* strain C83 *L. Gamar, K. Blondeau & J.-M. Simonet*

288 The contribution of moulds and yeasts to the fermentation of 'agbelima' cassava dough *W. K. Amoa-Awua, J. C. Frisvad, S. Sefa-Dedeh & M. Jakobsen*

297 Detection, distribution and probable fate of *Escherichia coli* O157 from asymptomatic cattle on a dairy farm *J. Porter, K. Mobbs, C. A. Hart, J. R. Saunders, R. W. Pickup & C. Edwards*

307 Effect of NaCl-tolerant lactic acid bacteria and NaCl on the fermentation characteristics and aerobic stability of silage *Y. Cai, S. Ohmomo, M. Ogawa & S. Kumai*

314 A rapid, sensitive and automated method for detection of *Salmonella* species in foods using AG-9600 AmpliSensor Analyzer *S. Chen, A. Yee, M. Griffiths, K. Y. Wu, C.-N. Wang, K. Rahn & S. A. De Grandis*

322 Evaluation of preservative effectiveness in pharmaceutical products: the use of a wild strain of *Pseudomonas cepacia F. Zani, A. Minutello, L. Maggi, P. Santi & P. Mazza*

327 The microbial degradation of benzothiazoles *M. A. Gaja & J. S. Knapp*

335 Use of the Malthus conductance growth analyser to determine numbers of thermophilic streptococci on stainless steel *S. H. Flint, J. D. Brooks & P. J. Bremer*

340 Detection and enumeration of viable but non-culturable transconjugants of *Escherichia coli* during the survival of recipient cells in river water *I. Arana, M. Pocino, A. Muela, A. Fernández-Astorga & I. Barcina*

347 Comparison between the evaluation of bacterial regrowth capability in a turbidimeter and biodegradable dissolved organic carbon bioreactor measurements in water *Y. Kott, F. Ribas, J. Frias & F. Lucena*

353 A feasibility study on seeding as a bioremediation practice for the oily Kuwaiti desert *S. S. Radwan, N. A. Sorkhoh, I. M. El-Nemr & A. F. El-Desouky*

359 Utilization of starch and synthesis of a combined amylase/α-glucosidase by the human colonic anaerobe *Bacteroides ovatus B. A. Degnan, S. Macfarlane & G. T. Macfarlane*

367 Growth of enterobacteria on fructo-oligosaccharides *R. Hartemink, K. M. J. Van Laere & F. M. Rombouts*

375 Polymerase chain reaction detection and speciation of *Campylobacter upsaliensis* and *C. helveticus* in human faeces and comparison with culture techniques *A. J. Lawson, D. Linton, J. Stanley & R. J. Owen*

381 Subtyping of *Listeria monocytogenes* on the basis of plasmid profiles and arsenic and cadmium susceptibility *J. McLauchlin, M. D. Hampton, S. Shah, E. J. Threlfall, A. A. Wieneke & G. D. W. Curtis*

389 Combined effect of bacteriocin-producing lactic acid bacteria and lactoperoxidase system activation on *Listeria monocytogenes* in refrigerated raw milk *E. Rodríguez, J. Tomillo, M. Nuñez & M. Medina*

Volume 83, Number 4, October 1997

397 Increased ELISA sensitivity using a modified extraction buffer for detection of *Xanthomonas campestris* pv. *vesicatoria* in leaf tissue *J. B. Jones, G. C. Somodi & J. W. Scott*

402 Production of alkaline xylanase by an alkaliphilic *Bacillus* sp. isolated from an alkaline soda lake *A. Gessesse & B. A. Gashe*

407 Determination of the influence of organic acids and nisin on shelf-life and microbiological safety aspects of fresh pork sausage *A. G. M. Scannell, C. Hill, D. J. Buckley & E. K. Arendt*

413 Characterization of the aggregation promoting factor from *Lactobacillus gasseri*, a vaginal isolate *S. Boris, J. E. Suárez & C. Barbés*

421 Diversity among aromatic hydrocarbon-degrading bacteria and their *meta*-cleavage genes *K. Daly, A. C. Dixon, R. P. J. Swannell, J. E. Lepo & I. M. Head*

430 Phytic acid-mediated regulation of secondary metabolism in *Streptomyces thermoviolaceus* grown in simple and complex media *A. D. Brabban & C. Edwards*

438 Immersion heat treatments for inactivation of *Salmonella enteritidis* with intact eggs *J. D. Schuman, B. W. Sheldon, J. M. Vandepopuliere & H. R. Ball Jr*

445 The use of an automated growth analyser to measure recovery times of single heat-injured *Salmonella* cells *P. J. Stephens, J. A. Joynson, K. W. Davies, R. Holbrook & T. J. Humphrey*

456 A selective medium for the rapid detection by an impedance technique of *Pseudomonas* spp. associated with poultry meat *G. Salvat, S. Rudelle, F. Humbert, P. Colin & C. Lahellec*

464 Bacterial influence on the production of paralytic shellfish toxins by dinoflagellated algae *W. R. Dantzer & R. E. Levin*

470 Production and properties of α-glucosidase from the thermotolerant bacterium *Thermomonospora curvata* *L. Janda, T. Pavelka, P. Tichý, J. Spížek & M. Petříček*

477 Coaggregation amongst aquatic biofilm bacteria *C. M.Buswell, Y. M. Herlihy, P. D. Marsh, C. W. Keevil & S. A. Leach*

485 Isolation and characterization of a cryptic plasmid from *Erwinia citreus* ATCC 31623 *M. Bilić & V. Delić*

493 Pulsed-field gel electrophoresis in the study of mesophilic and psychrophilic *Aeromonas* spp. *M.-L. Hänninen & V. Hirvelä-Koski*

499 Isolation and characterization of nisin-producing *Lactococcus lactis* subsp. *lactis* from bean-sprouts *Y. Cai, L-K. Ng & J. M. Farber*

508 The influence of cell surface properties of thermophilic streptococci on attachment to stainless steel *S. H. Flint, J. D. Brooks & P. J. Bremer*

518 A quantitative PCR-ELISA for the rapid enumeration of bacteria in refrigerated raw milk *R. Gutiérrez, T. García, I. González, B. Sanz, P. E. Hernández & R. Martin*

524 A study of a bacterial immobilization substratum for use in the bioremediation of crude oil in a saltwater system *N. G. Wilson & G. Bradley*

Volume 83, Number 5, November 1997

531 *A Review*: Antibiotic use in animal agriculture *R. H. Gustafson & R. E. Bowen*

542 Pathogenicity of atypical *Aeromonas salmonicida* in Atlantic salmon compared with protease production *B. Gunnlaugsdóttir & B. K. Gudmundsdóttir*

552 Changes in electrophoretic profiles of lipopolysaccharides from competitive strains of *Bradyrhizobium* spp. induced by soybean roots *M. R. M. M. L. Scotti, D. R. Carvalho-Silva, M. A. T. Vargas, M. C. Neves & J. Döbereiner*

561 Biodegradation studies of polyaromatic hydrocarbons in aqueous media *E. Šepič, M. Bricelj & H. Leskovšek*

569 Attributes of fresh gilt-head seabream (*Sparus aurata*) fillets treated with potassium sorbate, sodium gluconate and stored under a modified atmosphere at 0 ± 1°C *E. H. Drosinos, K. Lambropoulou, E. Mitre & G.-J. E. Nychas*

576 Phenotypic heterogeneity of *Pseudomonas corrugata* strains from southern Italy *V. Catara, L. Gardan & M. M. Lopez*

587 Quantitative analysis and mapping of micro-organisms in anaerobic digester granules using a combination of transmission electron microscopy with immunotechnology *A. R. Howgrave-Graham, A. J. L. Macario & F. M. Wallis*

596 Variation within *Mycobacterium scrofulaceum* *A. D. Khosravi, J. L. Stanford, H. D. Donoghue & G. A. W. Rook*

603 Monitoring Biolog patterns and r/K-strategists in the intensive culture of *Artemia* juveniles *L. Verschuere, J. Dhont, P. Sorgeloos & W. Verstraete*

613 Spoilage microflora in fresh chicken breast stored at 4°C: influence of packaging methods *S. M. Jiménez, M. S. Salsi, M. C. Tiburzi, R. C. Rafaghelli, M. A. Tessi & V. R. Coutaz*

619 The prevalence of campylobacters and arcobacters in broiler chickens *H. I. Atabay & J. E. L. Corry*

627 Bacteriophages of enteric bacteria in drinking water, comparison of their distribution in two countries *R. Armon, R. Araujo, Y. Kott, F. Lucena & J. Jofre*

634 Characterization of the *rpsL* and *rrs* genes of streptomycin-resistant clinical isolates of *Mycobacterium tuberculosis* in Japan *C. Katsukawa, A. Tamaru, Y. Miyata, C. Abe, M. Makino & Y. Suzuki*

641 Detection of *Campylobacter jejuni* in food and poultry viscera using immunomagnetic separation and microtitre hybridization *M. Lamoureux, A. MacKay, S. Messier, I. Fliss, B. W. Blais, R. A. Holley & R. E. Simard*

652 Antimicrobial activity among *Pseudomonas* and related strains of mineral water origin *A. Vachée, D. A. A. Mossel & H. Leclerc*

659 *Report of a Meeting*: Advisory Committee on Dangerous Pathogens (ACDP). Seminar on Microbiological Risk Assessment, 28 January 1997

Volume 83, Number 6, December 1997

665 Survival of *Xenorhabdus nematophilus* and *Photorhabdus luminescens* in water and soil *J. A. W. Morgan, V. Kuntzelmann, S. Tavernor, M. A. Ousley & C. Winstanley*

671 Inhibition of *Listeria monocytogenes* by enterocin 4 during the manufacture and ripening of Manchego cheese *M. Nuñez, J. L. Rodriguez, E. Garcia, P. Gaya & M. Medina*

678 Specific peptides of casein pancreatic digestion enhance the production of tetanus toxin *Z. Porfirio, S. M. Prado, M. D. C. Vancetto, F. Fratelli, E. W. Alves, I. Raw, B. L. Fernandes, A. C. M. Camargo & I. Lebrun*

685 Isolation and growth physiology of novel thermoactinomycetes *C. A. Yallop, C. Edwards & S.T. Williams*

693 The transmission of campylobacter in piggeries; an epidemiological study *M. J. B. M. Weijtens, J. van der Plas, P. G. H. Bijker, H. A. P. Urlings, D. Koster, J. G. van Logtestijn & J. H. J. Huis in't Veld*

699 Determination of clonal relationships of *Salmonella typhimurium* by numerical analysis of macrorestriction profiles *S. L. W. On & D. L. Baggesen*

707 A bacterial pathogen of *Rhodella reticulata* *T. Toncheva-Panova & J. Ivanova*

712 Identification of enteroaggregative *Escherichia coli* based on surface properties *H. Chart, J. Spencer, H. R. Smith & B. Rowe*

718 Purification and characterization of a feruloyl esterase from the fungus *Penicillium expansum J. Donaghy & A. M. McKay*

727 A universal protocol for PCR detection of 13 species of foodborne pathogens in foods *R.-F. Wang, W.-W. Cao & C. E. Cerniglia*

737 Characterization and quantification of bacterial pathogens and indicator organisms in household kitchens with and without the use of a disinfectant cleaner *K. L. Josephson, J. R. Rubino & I. L. Pepper*

751 Effect of carbon and nitrogen limitation on lignin peroxidase and manganese peroxidase production by *Phanerochaete flavido-alba O. Ben Hamman, T. de la Rubia & J. Martinez*

758 Improved translational efficiency of subtilisin YaB gene with different initiation codons in *Bacillus subtilis* and alkalophilic *Bacillus* YaB *C. M. Yeh, H. K. Chang, H. M. Hsieh, K. Yoda, M. Yamasaki & Y. C. Tsai*

764 Characterization of the bacterial flora of Sudanese sorghum flour and sorghum sourdough *S. H. Hamad, M. C. Dieng, M. A. Ehrmann & R. F. Vogel*

771 *Chrysosporium* species, potential spoilage organisms of chocolate *J. L. Kinderlerer*

779 Index